

Claims

1. A bee monitoring system for monitoring bee colonies in a hive comprising:
  - a microprocessor;
  - at least two input transducers; and
  - at least two output signals.
2. The monitoring system of claim 1, wherein said system has at least three input transducers.
3. The monitoring system of claim 1, wherein said system has at least four input transducers.
4. The monitoring system of claim 1, wherein said system has at least five input transducers.
5. The monitoring system of claim 1, wherein said system has at least six input transducers.
6. The monitoring system of claim 1, wherein said system has at least seven input transducers.
7. The monitoring system of claim 1, wherein said system has at least eight input transducers.
8. The monitoring system of claim 1, wherein said input transducers are selected from the group consisting of a temperature sensor, a scale, a humidity sensor, a global positioning system, and a counter.

9. The monitoring system of claim 1, wherein said output signals are transmitted by a method selected from the group consisting of telephone line, radio, and satellite.
10. The monitoring system of claim 1, wherein said output signals are capable of controlling remote devices.
11. The monitoring system of claim 1, wherein said microprocessor is a RABBIT™ 2000 microprocessor.
12. The monitoring system of claim 1, wherein one of said at least two input transducers is a bee counter comprising:
  - at least one set fo an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a debounce circuit;
  - a microprocessor; and
  - a multiplexer.
13. The monitoring system of claim 12, wherein said hive has a plurality of doors and said counter has a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.
14. The monitoring system of claim 12, wherein said microprocessor is a RABBIT™ 2000 microprocessor.
15. The monitoring system of claim 12, wherein said microprocessor has the programming shown in FIG. 3.

16. A bee counter for a hive comprising:

at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a de-bounce circuit;  
a microprocessor; and  
a multiplexer.

17. The bee counter of claim 16, wherein said hive comprises a plurality of doors and said counter comprises a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.

18. The bee counter of claim 16, wherein said microprocessor is a RABBIT™ 2000 microprocessor.

19. The bee counter of claim 16, wherein said microprocessor has the programming shown in FIG. 3.

20. A bee monitoring system for monitoring bee colonies in a hive comprising:

a microprocessor;  
at least eight input transducers selected from the group consisting of a temperature sensor, a scale, a humidity sensor, and a global positioning system;  
a counter comprising at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit, and a de-bounce circuit; a microprocessor; and a multiplexer, wherein the hive comprises a plurality of doors and the counter comprises a plurality of emitters and a plurality of detectors and the counter is capable of counting bees in a single door of the hive; and  
at least two output signals, wherein the output signals are transmitted by a method selected from the group consisting of telephone line, radio, and satellite and wherein the output signals are capable of controlling remote devices.